

REMARKS

Claims 1-31 are pending in the present application. Reconsideration of the application is respectfully requested in view of the following responsive remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

In the office action of March 31, 2006, the following actions were taken:

- (1) Claims 1-7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,929,590 to Maruta et al. (hereinafter "Maruta");
- (2) Claims 8-10 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Maruta in view of U.S. Patent No. 6,352,805 to Taylor et al. (hereinafter "Taylor");
- (3) Claims 13, 18-20, and 22-31 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,692,799 to Waller, Jr. (hereinafter "Waller, Jr.") in view of Taylor;
- (4) Claims 14-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Waller, Jr. in view of Taylor as applied to claim 13 and further in view of Maruta;
- (5) Claims 11 and 21 were deemed to be directed to allowable subject matter, but objected to as depending on a rejected base claim.

It is respectfully submitted that the presently pending claims be examined and allowed.

The present invention is directed to the preparation of fused ink-jet images. The invention provides a media sheet comprising a substrate, an ink-receiving layer coated onto a surface of the substrate, wherein the ink-receiving layer comprises hollow particulates, and wherein a UV protection layer is coated on the ink receiving layer which includes UV absorbing latex particulates. The present invention also provides a system for preparing fused ink-jet images comprising a media sheet as described above, an ink-jet ink that, when printed onto the sheet, passes through the protection layer and into the voids of the particulates of the ink receiving layer. Also included in the system is a fusion system for fusing the UV protection layer and the ink receiving layer after printing.

Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,929,590 to Maruta. Before discussing the rejections, it is thought proper to briefly state what is required to sustain such a rejection. It is well settled that "[a] claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987). In order to establish anticipation under 35 U.S.C. § 102, all elements of the claim must be found in a single reference. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986), *cert. denied* 107 S.Ct. 1606 (1987). In particular, as pointed out by the court in *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1981), *cert. denied*, 469 U.S. 851 (1984), "anticipation requires that each and every element of the claimed invention be disclosed in a prior art reference." "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.* 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). In view of this background, Applicant submits that Maruta does not anticipate the present invention under § 102 because that reference does not disclose each and every element of the invention.

Maruta discloses a thermosensitive recording material, comprising a support, an undercoat layer formed on the support which includes spherical hollow particles; and a thermosensitive coloring layer formed on the undercoat layer which includes a leuco dye and color developer. The material may further comprise a protective layer formed on the coloring layer.

Maruta fails to teach the elements of the invention required in claim 1, both in terms of the characteristics of the elements as well as the relationship between elements. This is clear in at least two respects. First, Maruta does not teach an ink receiving layer coated onto a substrate as is provided by the present invention. The layer that is coated onto the substrate in Maruta is a heat insulating layer containing hollow particulates. Col. 2, lines 55-57. This layer, however, does not receive ink according to Maruta. Indeed, none of the layers in Maruta actually receive ink via a printing process—Maruta does not contemplate the use of printed ink, as images are to be formed by applying heat to an already present thermosensitive dye. As such,

there is no disclosure in Maruta of an ink-receiving layer coated onto a substrate. The layer that is coated onto the substrate in the present invention is designed to receive and hold printed ink-jet ink and therefore a printed image. In contrast, the layer coated onto the substrate in Maruta does not receive ink and there is no teaching in Maruta that it is configured to do so. The image in Maruta is situated in the thermosensitive coloring layer, a layer which (a) is not coated onto the substrate, and (b) receives no printed ink.

Second, Maruta fails to teach a UV protective layer coated onto an ink receiving layer as required by the claimed invention. While Maruta does teach a protective layer, said layer is formed on the thermosensitive coloring layer. Col. 6, lines 50-51. The thermosensitive coloring layer, as discussed above, does not correspond to the present ink receiving layer because it is not coated onto the substrate and does not receive ink. Furthermore, Maruta does not teach the protective layer as being UV protective, or as including UV absorbing latex particulates, as is required in claim 1. Therefore, Maruta fails to teach both the nature of this element and its relationship in the media sheet, both of which are required in the currently pending claims.

In light of this, Applicant submits that Maruta does not anticipate claim 1, as it fails to disclose each and every element of that claim. Accordingly, Maruta also fails to anticipate dependent claims 2-7, each of which include the elements of claim 1. Applicant therefore respectfully requests that this rejection be withdrawn.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 8-10, 12-20, and 22-31 as being obvious in view of a number of references. The Applicant respectfully submits that these claims are patentable over the cited reference for the reasons set forth below, and that the rejection should be withdrawn.

Before discussing the obviousness rejections herein, it is thought proper to briefly state what is required to sustain such a rejection. The issue under § 103 is whether the PTO has stated a case of *prima facie* obviousness. According to the MPEP § 2142, the Examiner has the burden and must establish a case of *prima facie* obviousness by showing the prior art reference, or references combined, teach or suggest all the claim limitations in the instant application. Further, the Examiner has

to establish some motivation or suggestion to combine and/or modify the references, where the motivation must arise from the references themselves, or the knowledge generally available to one of ordinary skill in the art. The Applicant respectfully asserts the Examiner has not satisfied the requirement for establishing a case of *prima facie* obviousness in any of the rejections.

Maruta in view of Taylor

The Examiner has rejected claims 8-10 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Maruta in view of Taylor. Applicant submits that these references, both alone and in combination, fail to teach each and every element of the claimed invention. Furthermore, these references provide no motivation to combine them, as doing so would defeat the function of Maruta and would be unlikely to succeed.

In making this rejection, the Examiner has asserted that Maruta discloses all of the limitations of the media sheet except for those encompassed by claims 8-10 and 12. As discussed above, Applicant submits that this is not so. Maruta fails to teach an ink receiving layer coated onto a substrate and a UV protection layer coated onto the ink receiving layer. Combining Maruta with Taylor does not remedy this deficiency. Taylor discloses an imaging element onto which a latex overcoat comprising a photopolymerizable component can be applied. This overcoat is to provide waterfastness to the underlying image. Optionally, the polymerizable component can be UV absorptive. Taylor does not, however, teach an ink receiving layer comprising hollow particulates as required by the present invention. The combination of these two references still falls short of yielding the present invention.

Taylor does teach of a UV protective coating. However, the nature of this coating and its use in Taylor are incompatible with the present invention. Taylor is directed to providing a durable, watertight overcoat for an imaged element, such as a processed photographic element. E.g., see Col. 3, lines 34-36, and col 6, lines 20-23. Because the protective overcoat is designed to keep out moisture, the image it is to protect must already be printed on the media before the overcoat is applied. Col 6, lines 23-25. Ink-jet printing on the media would not be possible once the overcoat is in place, because an ink-jet ink would be unable or at least inefficient to penetrate the polymer coating.

In contrast, the UV protection layer of the present invention is applied before printing. An ink-jet ink printed on the surface of this layer can substantially penetrate the layer and be contained in the ink receiving layer below. This result would not arise through combining Taylor and Maruta. In view of this, the Applicant submits that the combination of Taylor and Maruta does not teach or suggest the elements of the present invention. Furthermore, there is no reasonable expectation that such a combination would be successful. In fact, to combine Taylor with Maruta in the manner necessary to approximate the present invention—i.e. apply the protective overcoat of Taylor to the thermosensitive media of Maruta—would likely render it impossible or impractical to print an image on that media. Therefore, a person having skill in the art would find no motivation to combine these references to arrive at the present invention. Applicant respectfully requests that this rejection also be withdrawn

Waller, Jr. in view of Taylor

The Examiner rejected claims 13, 18-20, and 22-31 under 35 U.S.C. § 103(a) as being unpatentable over Waller, Jr. in view of Taylor. These claims provide a system and a method for preparing a fused ink-jet image, comprising the media sheet already discussed. The Examiner suggests that Waller, Jr. discloses such a system. Waller, Jr. discloses an imageable media comprising a substrate, a porous layer containing particles and granules disposed on one surface of the substrate, and an overlayer disposed on at least one side of the substrate which may be fused to the layer underneath it. However, the teaching of Waller, Jr. suffers deficiencies similar to those of the other cited references.

First, Waller, Jr. does not teach an ink receiving layer comprising hollow particulates. The Examiner has suggested that the porous layer of Waller, Jr. (element 15, Fig. 1) corresponds to this element of claims 13 and 25. However, the particles and granules in the porous layer as disclosed in Waller, Jr. are not the same type of particles as claimed. Second, the overlayer of Waller, Jr., like the protective overcoat in Taylor, comprises an impermeable lamina that must be applied after an image has been printed on the underlying media. The system of the present invention, on the other hand, comprises a media sheet that already possesses a UV protection layer when an ink-jet image is printed thereon. Additionally, the fusing step of Waller, Jr.

referred to by the Examiner does not correspond to the fusion system and step of claims 13 and 25, respectively. This step in Waller, Jr. is not a process to fuse the overlayer with the media. Rather, it is employed to fix the colorant in the porous layer before applying the overlayer.

It is clear that neither Waller, Jr. nor Taylor teaches or suggests each and every element of claim 13 or 25, and they certainly do not do so when combined. As such, these references also fail to teach or suggest every element of claims 18-20, 22-24, and 26-31, each of which includes all of the limitations of claim 13 or 25. Applicant therefore requests that these rejections be withdrawn.

Waller, Jr. in view of Taylor and Maruta

The Examiner has rejected claims 14-17 under 35 U.S.C. § 103(a) as being unpatentable over Waller, Jr. in view of Taylor as applied to claim 13 and further in view of Maruta. For the reasons discussed above, Applicant submits that none of these references, alone or in combination, teaches or suggests every element of claim 13. Particularly, these references fail to teach an ink receiving layer coated onto a substrate and a UV protection layer coated onto the ink receiving layer as set forth in claim 13. These references therefore also fail to teach every element of claims 14-17, which provide further limitations on these elements. Therefore, Applicant requests that these rejections be withdrawn.

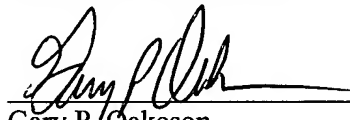
CONCLUSION

In view of the foregoing, Applicants believe that all of the pending claims present allowable subject matter and allowance is respectfully requested. If any impediment to the allowance of these claims remains after consideration of the above remarks, and such impediment could be removed during a telephone interview, the Examiner is invited to telephone W. Bradley Haymond (Registration No. 35,186) at (541) 715-0159 so that such issues may be resolved as expeditiously as possible.

Please charge any additional fees except for Issue Fee or credit any overpayment to Deposit Account No. 08-2025.

Dated this 30th day of June, 2006.

Respectfully submitted,



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